REMARKS

The Examiner rejected claims 52 and 53 under 35 U.S.C. § 112, second paragraph. In addition, the Examiner stated that "claim 53 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims." In response, Applicants have canceled 52 and have rewriten claim 53 to include all of the limitations of claim 52 in a manner that overcomes the rejection(s) under 35 U.S.C. § 112, second paragraph. Applicants gratefully acknowledge the Examiner's indication of allowable subject matter.

The Examiner rejected claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50 under 35 U.S.C. § 102(e) as allegedly anticipated by Mase et al. (U.S. Patent 6,200,868).

The Examiner rejected claims 8-10, 17, 38-41, 43-46, and 51 as allegedly unpatentable under 35 U.S.C. § 103(a) over Mase et al. (U.S. Patent 6,200,868) in view of Moslehi et al. (U.S. Patent 4,715,937).

The Examiner rejected claim 52 under 35 U.S.C. § 102(e) as allegedly anticipated by Shoji (U.S. Patent 6,214,684). In light of the cancelation of claim 52, Applicants contend that the rejection of claim 52 is moot.

Applicants respectfully traverse the §102(e) and §103(a) rejections with the following arguments.

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35 U.S.C. §102(e): Claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50

The Examiner rejected claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50 under 35 U.S.C. § 102(e) as allegedly anticipated by Mase et al. (U.S. Patent 6,200,868).

Applicants respectfully contend that Mase does not anticipate claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50, because Mase does not teach each and every feature of claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50. For example, Mase does not teach:

> "**laser trimming** the polysilicon portion by a film growth method selective to laser-absorbing polysilicon" (emphasis added) (claims 1, 2, and 4-7);
>
> "**laser trimming** at least one unmasked polysilicon portion intended for a p-channel device by a film growth method selective to laser-absorbing polysilicon" (emphasis added) (claims 14, 15);
>
> "**laser trimming** at least an electrically significant portion of the polysilicon portion by a film growth method selective to laser-absorbing semiconductor material" (emphasis added) (claims 23-24, 42, and 47-50); and
>
> "**laser trimming** at least an electrically significant portion of one unmasked polysilicon portion intended for a p-channel device by a film growth method selective to laser-absorbing polysilicon" (emphasis added) (claims 36 and 37).

Applicants contend that Mase does not teach laser trimming. In fact, Mase does not even mention the use of a laser for any purpose.

Based on the preceding argument, Applicants respectfully maintain that Mase does not anticipate claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50, and that claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50 are in condition for allowance.

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35 U.S.C. §103(a): Claims 8-10, 17, 38-41, 43-46, and 51

The Examiner rejected claims 8-10, 17, 38-41, 43-46, and 51 as allegedly unpatentable under 35 U.S.C. § 103(a) over Mase et al. (U.S. Patent 6,200,868) in view of Moslehi et al. (U.S. Patent 4,715,937).

Since claims 8-10 depend from claim 1, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 8-10 are not unpatentable under 35 U.S.C. §103(a).

Since claim 17 depends from claim 14, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claim 17 is not unpatentable under 35 U.S.C. §103(a).

Since claims 40-41 and 43-46 depend from claim 23, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 40-41 and 43-46 are not unpatentable under 35 U.S.C. §103(a).

Since claim 38 and 51 depend from claim 36, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 38 and 51 are not unpatentable under 35 U.S.C. §103(a).

In addition, Applicants respectfully contend that claims 8-10, 17, 38-41, 43-46, and 51 are not unpatentable over Mase in view of Moslehi, because Mase cannot be combined with Moslehi. Applicants respectfully contend that the Examiner has not provided a persuasive reason for combining Mase and Moslehi. The Examiner alleges: "It would have been within the scope of one of ordinary skill in the art to combine the teachings of Mase et al and Moslehi et al to enable

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the gate conductor trimming step of Mase et al to be performed and also to obtain ultra-thin high quality insulators (Moslehi et al. Column 1, lines 15-18)". In response, Applicants note that mere enabling the gate conductor trimming step of Mase to be performed is not persuasive because Mase already discloses a method for performing a gate conductor trimming step in the Examiner's argument for rejecting claims 1, 2, 4-7, 14, 15, 23, 24, 36, 37, 42, and 47-50. Applicants further contend that the "ultra-thin" aspect of insulator referred to by the Examiner provides a persuasive reason why one of ordinary skill in the art would not combine the teachings of Muse et al and Moslehi, based on the following argument.

Applicants note that Moslehi discloses "laser-enhanced radiation" for growing gate insulators comprising thermal nitrides on silicon (see Moslehi, col. 1, lines 21-31). Moslehi also discloses that said laser enhanced nitridation can grow nitrides of only 25 angstroms or less in thickness (see Moslehi, col. 2, lines 8-13). Moslehi further states that a difficulty with the laser technique is that "the films are of insufficient thickness" (see Moslehi, col. 2, lines 40-44). Applicants additionally note that Mase requires silicon nitride films of 50 to 150 nanometers which is equivalent to 500 to 1500 angstroms (see Mase, col. 10, lines 66-67). Thus, Moslehi's disclosure makes it clear that use of a laser to grow a thermal oxide on silicon cannot form a silicon nitride film of the thickness required by Mase. Therefore, use of laser as disclosed by Moslehi to grow a thermal oxide on silicon would destroy Mase's invention. Thus, Applicants respectfully contend that one of ordinary skill in the art would not combine the teachings of Mase and Moslehi "to obtain ultra-thin high quality insulators" as alleged by the Examiner. Accordingly, Applicants respectfully contend that the Examiner has not established a *prima facie* case for obviousness in relation to claims 8-10, 17, 38-41, 43-46, and 51, and the rejection under

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35 U.S.C. § 103(a) is improper.

Furthermore, the Examiner alleges that "it would have been a matter of routine optimization within the teachings of Moslehi et al and Mase et al to determine suitable exposure pulses, depths, energy, pressure, and flow to achieve Mase's et al trimmed gate conductor step." In response, Applicants contend that it would require substantial experimentation to determine suitable exposure pulses, depths, energy, pressure, and flow to achieve Mase's trimmed gate conductor step using laser trimming as taught by Moslehi. However, regardless of the level of difficulty required to achieve Mase's trimmed gate conductor step using laser trimming as taught by Moslehi, the Examiner has not demonstrated that the values of exposure pulses, depths, energy, pressure, and flow so arrived at would teach or suggest the values of exposure pulses, depths, energy, pressure, and flow recited in claims 8-10, 17, 38-41, 43-46, and 51.

Applicants respectfully contend that in order to establish obviousness with respect to claims 8-10, 17, 38-41, 43-46, and 51 based on Mase and Moslehi, the Examiner is required to cite additional prior art references which teach or suggest the values of exposure pulses, depths, energy, pressure, and flow recited in claims 8-10, 17, 38-41, 43-46, and 51, and to provide a persuasive reason for modifying Mase with the teachings or suggestions of said additional prior art references.

Based on the preceding arguments, Applicants respectfully maintain that claims 8-10, 17, 38-41, 43-46, and 51 are not unpatentable over Mase in view of Moslehi, and that claims 8-10, 17, 38-41, 43-46, and 51 are in condition for allowance.

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CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

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